

Work Order ID 152479

Monday, October 24, 2016 11:42:02 AM

152479

Page 1

Item ID: D3883-2

Revision ID:

Item Name: Saddle, Outside RH

Start Date: 11/18/2016 Start Qty: 4.00

Required Date: 11/24/2016 Req'd Qty: 4.00

Reference:

Accept

N900040100Setup Start ***NS1***Stop ***NS2***

Cust Item ID:

Customer:

Approvals:

Process Plan:

DAS
21
9-89

Date: OCT 25 2016

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start ***NR1***Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

D3883

D

100

0.18

100

HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

0.44

HAAS CNC vertical machine #1

Program Batch No.

Double check by: JFC

1-Machine Step No 1 per Folio FA817 and inspect per attached Dimension Sheets

2-Machine Step No 2 per Folio FA817 and inspect per attached Dimension Sheets

3-Machine Step No 3 per Folio FA817 and inspect per Dimension Sheets

DAS
44
9-89

1611-21

110

QC1- Inspection performed by CMM

0.00

110

QC

Memo

0.01

Quality Control

Inspect on CMM as per folio CMMA013.

DWG REV: D

CMM PROG. REV: D

DAS
44
9-89

1611-22

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																															
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Work Order ID 152479

Monday, October 24, 2016 11:42:02 AM

152479

Page 2

Item ID: D3883-2**Accept*****N900040100*****Setup Start*****NS1*****Revision ID:****Stop*****NS2*****Item Name:** Saddle, Outside RH**Start Date:** 11/18/2016 **Start Qty:** 4.00***4*****Cust Item ID:****Required Date:** 11/24/2016 **Req'd Qty:** 4.00***4*****Customer:****Reference:****Approvals:****Process Plan:** _____**Date:** _____**Tooling:** _____**Date:** _____**Run Start*****NR1*****QC:** _____**Date:** _____**SPC (Y/N):** _____**Date:** _____**Stop*****NR2*****Sequence ID/
Work Center ID****Operation
Description****Set Up/
Run Hours****Tool ID****Tool #****Plan
Code****Accept
Qty****Reject
Qty****Reject
Number****Insp.
Stamp**

120

QC8- Inspect parts - second check

0.00

120

QC

Memo

0.01

Quality Control

8

0

32
9-89

16-11-24

130

Chemical Conversion Coat per QSI005 4.1

0.00

130

HandFinish

Memo

0.08

Hand Finishing

(x8)

0

2016/11/28
BEB

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Work Order ID 152479

Monday, October 24, 2016 11:42:02 AM

152479

Page 3

Item ID: D3883-2 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Saddle, Outside RH
Start Date: 11/18/2016 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 11/24/2016 Req'd Qty: 4.00 ***4*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
140									
Powdercoat									
Powder Coating									
	Memo	0.02							
	MASK INSIDE SURFACES OF SADDLE PRIOR TO APPLICATION OF POWDER COAT AS PER INDICATED ON DWG (SEE NOTE 2)								
	<i>11/18/18</i>								
	DO NOT MASK INSIDE FLANGE SURFACE								
	START TIME: <i>3:25</i>								
	OVEN TEMPERATURE: <i>300°</i>								
	FINISH TIME: <i>3:55</i>								
150	QC3- Inspect Part Finish	0.00							
150									
QC									
Quality Control	Memo	0.01							

DAS
38
9-89
DEC 02 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Work Order ID 152479

Monday, October 24, 2016 11:42:03 AM

152479

Page 4

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Revision ID: Stop ***NS2***
Item Name: Saddle, Outside RH
Start Date: 11/18/2016 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 11/24/2016 Req'd Qty: 4.00 ***4*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	Identify as per dwg & Stock Location: <i>St404</i>	0.00				<i>8</i>			
160									
Packaging	Memo	0.01							
Packaging									
170	QC21- Final Inspection - Work Order Release	0.00							
170									
QC	Memo	0.07							
Quality Control									

8
DEC 02 2016
DAS 6
9-89

DAS
21
9-89

DEC 05 2016

umf
16-12-05

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
QAC 8 28-P QAC 12 28-P			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐ Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐			FAULT CATEGORY Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		
OTHER :					

Picklist Print

Monday, October 24, 2016 11:42:02 AM

Page 1/1

Work Order ID: 152479

152479

Parent Item: D3883-2

D3883-2

Parent Item Name: Saddle, Outside RH

Start Date: 11/18/2016

Required Date: 11/24/2016

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP RevA: New issue DD verified by:EC
15.05.20 remove inside powdercoat DD VERF:JLM

IPP REV:B

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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D6101-015		Manufactured	No				Each	39.0000		4			
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D6101-015

Saddle Billet

DAS
44
9-89

11-20

Location

Loc Qty

Loc Code

MAT045

39

144955

9

150665

10

151161

20

152432

2

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
JAC DA SS-E				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

DART AEROSPACE LTD		Work Order: 152479
Description: Saddle, Outboard, RH		Part Number: D3883-2
Inspection Dwg: D3883	Rev. D	Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing and record below:

				Recorded Actual Dimensions				By	Date
Dim	Min	Max	Go/No Go Gauge	1	2	3	4		
A	2.870	2.880		2.875	2.875	2.875	2.875		
B	1.433	1.443		1.438	1.438	1.438	1.438		
C	0.638	0.658	.519	.644	.644	.644	.645		
D	3.895	3.905		3.900	3.900	3.900	3.900		
E	0.257	0.262		.258	.258	.258	.258		
F	0.605	0.625	.486	.611	.613	.611	.612		
G	1.120	1.130		1.125	1.125	1.125	1.125		
H	2.245	2.255		2.250	2.250	2.250	2.250		
I	2.000	2.020		2.000	2.000	2.000	2.000		
J	0.140	0.165		.148	.148	.149	.148		
K	0.240	0.260		.247	.248	.250	.248		
L	0.115	0.135		.123	.124	.124	.124		
M	0.140	0.165		.148	.151	.149	.150		
N	0.720	0.780		.765	.765	.765	.765		
O	0.240	0.260		.254	.254	.253	.252		
P	0.110	0.140		.135	.135	.135	.135		
Q	0.178	0.198		.188	.188	.188	.188		
R	2.825	2.885		2.855	2.855	2.855	2.855		
S	0.316	0.321		.316	.316	.316	.316		
T	0.990	1.010		1.000	1.000	.999	1.000		
U	1.745	1.755		1.750	1.750	1.750	1.750		
V	5.990	6.010		6.000	6.000	6.000	6.000		
W	1.245	1.255		1.250	1.250	1.250	1.250		
X	0.490	0.510		.498	.498	.499	.500		
Y	1.220	1.280		1.250	1.250	1.250	1.250		
Z	2.495	2.505		2.500	2.500	2.500	2.500		
AA	0.313	0.318		.314	.314	.314	.314		
AB	0.020	0.040		.025	.025	.025	.025		
AC	0.760	0.765		.764	.764	.764	.764		
AD	0.215	0.220		.219	.219	.219	.219		
AE	1.265	1.285		1.265	1.265	1.265	1.265		
AF									
Accept/Reject				✓	✓	✓	✓		

Measured by: 9-89	Audited by: 32
Date: 16-11-22	Date: 16-11-24

Rev	Date	Change	Revised by	Approved
A	09.10.22	New Issue	KJ	JLM
B	09.11.25	Dimension AE added	KJ	
C	15.06.22	Dwg Rev updated	KJ	

DART AEROSPACE LTD		Work Order:	152479
Description: Saddle, Outboard, RH		Part Number:	D3883-2
Inspection Dwg: D3883 Rev. D		Page 1 of 1	

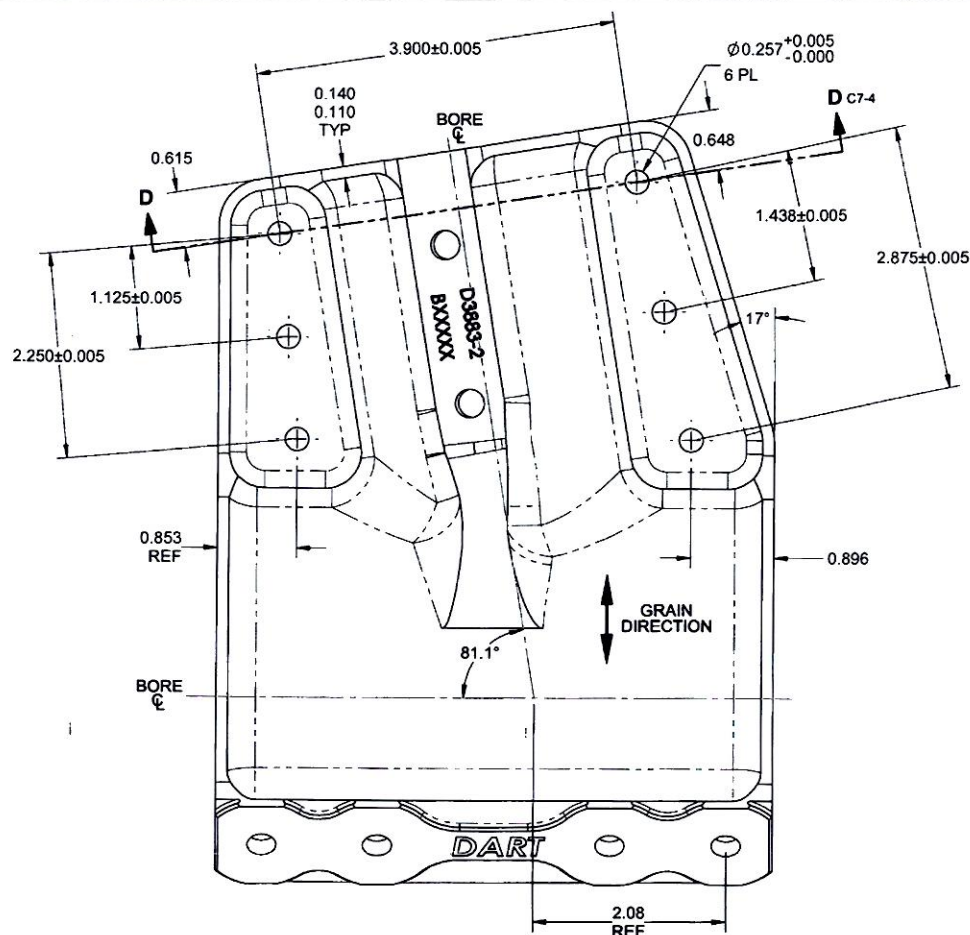
Inspect dimensions highlighted on inspection sheet drawing and record below:

				Recorded Actual Dimensions				By	Date
Dim	Min	Max	Go/No Go Gauge	5	6	7	8		
A	2.870	2.880		2.875	2.875	2.875	2.875		
B	1.433	1.443		1.438	1.438	1.438	1.438		
C	0.638	0.658		.645	.644	.645	.643		
D	3.895	3.905		3.900	3.900	3.900	3.900		
E	0.257	0.262		.258	.258	.258	.258		
F	0.605	0.625		.613	.611	.613	.611		
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Q	0.178	0.198		.188	.188	.188	.188		
R	2.825	2.885		2.855	2.855	2.855	2.855		
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AB	0.020	0.040		.025	.025	.025	.025		
AC	0.760	0.765		.764	.764	.764	.764		
AD	0.215	0.220		.219	.219	.219	.219		
AE	1.265	1.285		1.265	1.265	1.265	1.265		
AF									
Accept/Reject				✓	✓	✓	✓		

Measured by:	44
Date:	16-11-22

Audited by:	32
Date:	16-11-24

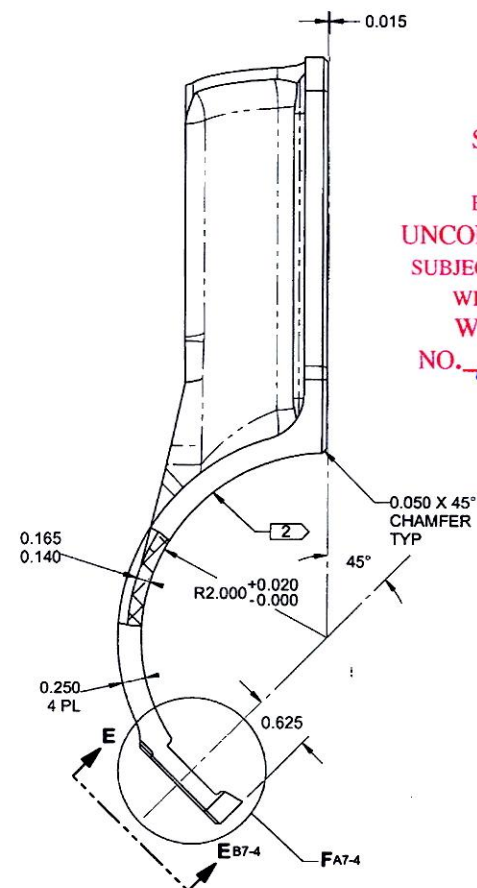
Rev	Date	Change	Revised by	Approved
A	09.10.22	New Issue	KJ	JLM
B	09.11.25	Dimension AE added	KJ	
C	15.06.22	Dwg Rev updated	KJ	



D3883-2 SADDLE, OUTBOARD RH

NOTES:

- 1) MATERIAL: 7075-T7351 ALUMINUM PER AMS-QQ-A-250/12, OR QQ-A-250/12 OR ASTM B209 (REF DART SPEC. D6101-015)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
MASK INSIDE SURFACES OF SADDLE PRIOR TO APPLICATION OF POWDER COAT
POWDER COAT GLOSS WHITE (4.3.5.1) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: ENGRAVE PART AND BATCH NUMBER IN THIS AREA TO
MAX. DEPTH OF 0.010 WITH A MIN. TOOL RAD OF R0.010
- 7) WEIGHT: 1.03 lbs
- 8) ENGRAVE DART LOGO TO MAX DEPTH OF 0.015 WITH MIN RAD R0.250
- 9) ALL NON-DIMENSIONED FEATURES DEFINED PER DRAWING FILE "D3883-2-REVD.SLDPRT"

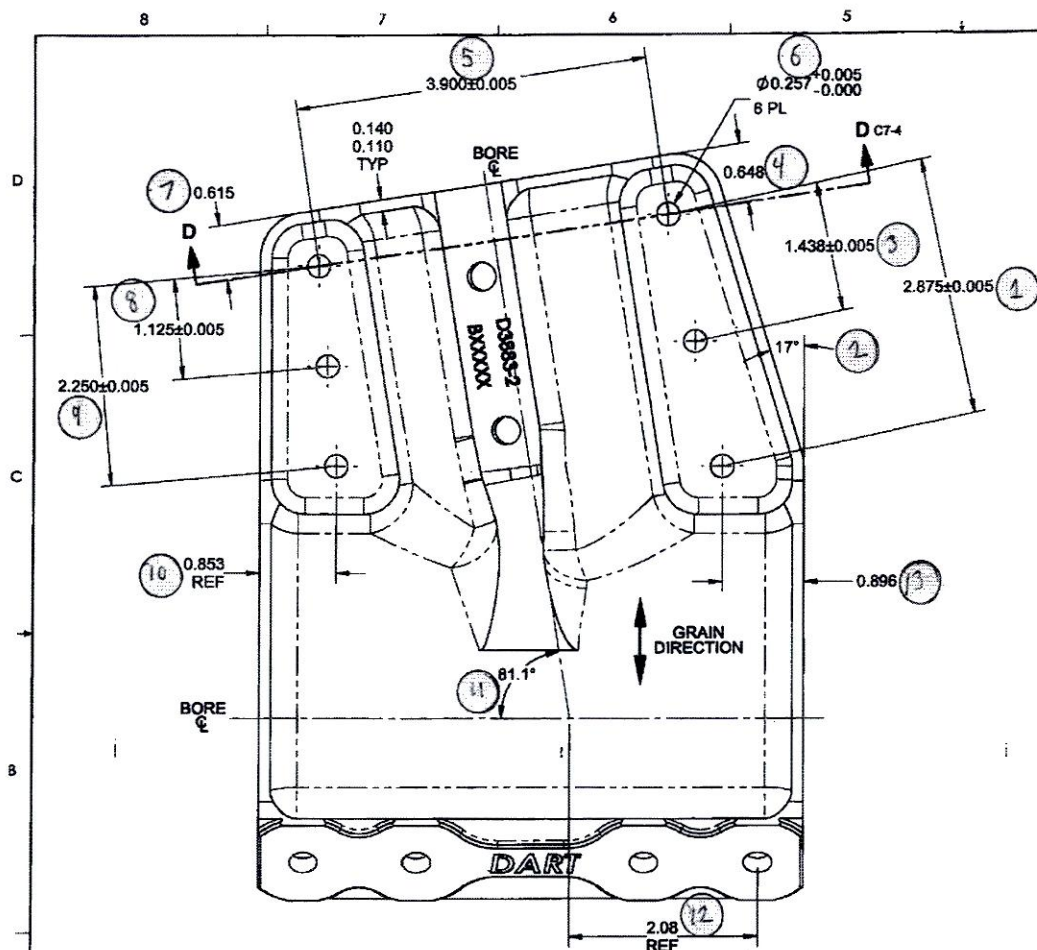


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NO. 152479 MJS
16-10-25

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APR 2015 MAY 19

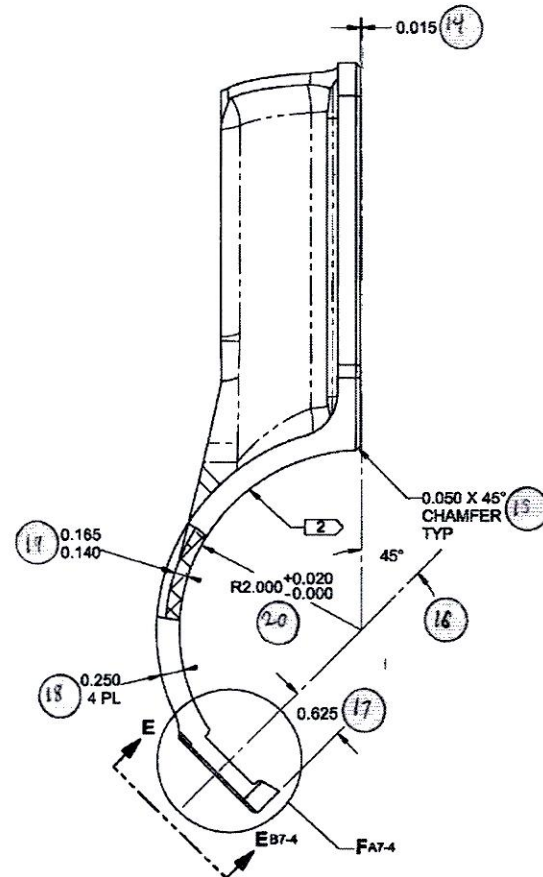
APPROVED	DESIGN	AP	DART AEROSPACE USA, INC. KENT, WA	
	DRAWN	AP		
	CHECKED	AJS	DRAWING NO.	REV. D
	MFG. APPR.	JLM	D3883	SHEET 3 OF 4
	APPROVED	HS	TITLE	SCALE
	DE APPR.	DS	OUTBOARD SADDLE	NTS
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D3883-2 SADDLE, OUTBOARD RH

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- 9) ALL NON-DIMENSIONED FEATURES DEFINED PER DRAWING FILE "D3883-2-REV.D.SLDPRT"



RELEASED
A.P. 2015 MAY 19

APPROVED	DESIGN	AP	DART AEROSPACE USA, INC.	
	DRAWN	AP	KENT, WA	
	CHECKED	AJS	DRAWING NO.	REV. D
	MFG. APPR.	JLM	D3883	SHEET 3 OF 4
	APPROVED	HS	TITLE	SCALE
	DE APPR.	DS	OUTBOARD SADDLE	NTS
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